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A Review on Wastewater Treatment using Constructed Wetland Systems: Implications from Sri Lanka

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The Constructed Wetlands (CWs) are engineering designs that improve wastewater quality in a harmless way to the ecosystem. Even though it is a low-cost method of water quality improvement, it is not widely used in Sri Lanka and not maintained in a proper manner. The current study reviews the utilization of constructed wetlands within the Sri Lankan context and the studies done related to the application were analyzed through a critical desktop search. Presently, CWs are being used in real-time applications in the fields of landfill leachate treatment, slaughterhouses, greywater, and the dairy industry within the country. Studies have proven the potential of using CWs as an optimum wastewater treatment option in the above categories. It is recommended to conduct further studies on the usage of CWs in other industrial fields as well and to determine the best fit for vegetation matching with the type of wastewater plus the climate region of the island.

Keywords: constructed wetlands, landfill leachate, slaughterhouse wastewater, greywater, dairy wastewater, Sri Lanka